

## High Gain Planar Compact Loop Antennas With High Radiation Resistance

### ABSTRACT

1    An antenna comprises a first electrically conductive  
2    loop; a feed point for feeding radio frequency energy  
3    into the first conductive loop; and a second electrically  
4    conductive loop, the first electrically conductive loop  
5    and the second electrically conductive loop each having a  
6    common conductive portion. A tuning capacitor is disposed  
7    along the second conductive loop. The second conductive  
8    loop is disposed within the first conductive loop. The  
9    first conductive loop may be polygonal or circular. The  
10   first and second conductive loops may be rectangular. The  
11   second conductive loop may be a conductor connected  
12   between a first point on the first conductive loop and a  
13   second point on the first conductive loop. A method for  
14   configuring this class of antennas includes the step of  
15   placing a capacitor in the second conductive loop.